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STATEMENT OF WORK

Introduction

This section describes the Services that IBM will provide under the terms of the IBM Customer Agreement (ICA) and this Statement of Work (SOW). Specifically, IBM will provide El Paso Independent School District (El Paso ISD) with a set of customized e-ratable services, with supporting documentation. The details of the Services to be provided are described in this section. These Services will be provided at existing and newly built El Paso ISD locations in El Paso, Texas.

IBM will provide the cabling installation, and functional testing to El Paso ISD to support moves, adds and changes for the existing cable plant. IBM will also provide UPS Implementation Services in accordance with the terms and conditions of the SOW.

This Statement of Work is comprised of the following sections:

1. Assumptions
2. IBM Responsibilities
3. El Paso ISD Responsibilities
4. Deliverable Materials - Documentation
5. Project Schedule
6. Completion Criteria
7. Charges
8. Third Party Audits

The following are incorporated in and made part of this Statement of Work:

- Appendix A, Deliverable Materials - Documentation
- Appendix B, Project Change Control Procedure
- Appendix C, Wiring Installation Standards
- Appendix D, Cabling Installation and Testing Specifications
- Appendix E, UPS Equipment
- Appendix F, Signature Page

Changes to this Statement of Work will be processed in accordance with the procedure described in Appendix B, "Project Change Control Procedure." The investigation and the implementation of changes may result in modifications to the Schedule, Charges or other terms of this Statement of Work.

This proposal will expire December 31, 2002 unless this date is extended by IBM and in writing.

1.0 ASSUMPTIONS

This SOW is based on the following assumptions:

General Scope Description

1. Only those components specified in this SOW are to be supplied and installed by IBM. Additional components can be specified via the Project Change Control Procedure detailed in Appendix B.
2. One portable classroom building represents one (1) classroom composite drop.
3. One cottage represents one (1) classroom composite drop.
4. IBM will provide up to 6,500 cable drops, which includes moves, adds and changes.
5. Media runs from aerial risers to a portable classroom or cottage risers are an average distance of seventy-five (75) feet.
6. Media runs from the existing MC to the IC are three hundred fifty (350) feet average distance inside the building that houses the MC and one hundred (100) feet average distance outside the building that houses the MC.
7. The number of required fiber paths from the existing IC to the existing MC are available to support the portable classroom buildings and cottages at the campus.
8. Data fiber paths are only terminated in this SOW.
9. Video paths are only terminated in this SOW. None of the following video items are being supplied or installed as part of this SOW: patch cables/cords/balans/media converters/video distribution components.
10. Only one (1) voice line support will be terminated to the composite drop faceplate insert. Only one (1) pair per cat-5e voice cable will be cross-connected at the IC to the voice tie cable.
11. Work to be performed at specific sites will be mutually agreed to and scheduled with IBM and El Paso ISD at least ten (10) business days prior to the commencement of the work.
12. IBM may use subcontractors in the performance of this Statement of Work.
13. IBM and our subcontractor must have unlimited, unrestricted access to all buildings. Any security requirements inclusive of guards, security codes/access codes, lighting and internal access and/or central monitoring are the responsibility of El Paso ISD.
14. IBM will be provided with access badges, keys and combinations or escorts to perform the work described in this SOW. Any delay encountered due to unavailability of buildings may result in additional charges being incurred by El Paso ISD. If this situation arises, it will be addressed via the Project Change Control Procedure detailed in Appendix B.
15. Adequate wall space/wiring closet space will be made available to IBM for the purpose of placing MC/IC products and equipment installed under this agreement. It is understood by IBM and El Paso ISD that any delay encountered due to insufficient wall space/insufficient wiring closet space may result in time delays and additional charges incurred by El Paso ISD. If this situation arises, it will be addressed via the Project Change Control Procedure detailed in Appendix B.

16. It is understood by El Paso ISD and IBM that this SOW is based upon the Start Date provided below. In the event this date is not achieved, IBM reserves the right to extend the projected project End Date on a working day for working day basis, and as mutually agreed upon by IBM and El Paso ISD via the Project Change Control Procedure detailed in Appendix B.
17. It is understood by El Paso ISD and IBM that this SOW and the pricing associated with this SOW are based upon the award of the total proposed SOW described in this document. The work described in this SOW will be performed during one continuous phase.
18. Work will be performed only at eligible sites.

1.1 Installation Environment for UPS:

- IBM will have full access to each facility where work is to be performed in accordance with the implementation schedule defined by El Paso ISD.
- Installations will only be performed at El Paso ISD facilities. All functioning structured cabling, including patch cables, for both the wide area network and the local area networks is not in the scope of this SOW.
- IBM will provide Services under this Agreement that are not disruptive to normal work operations unless other times are mutually agreed to.

1.2 Exclusions from this Statement of Work

1. IBM is not responsible under this SOW for the identification or correction of any existing safety and/or code violations, whether federal, state or local, including but not limited to fire and electrical codes. If IBM should discover any safety and/or code violations during the course of this project, IBM will notify El Paso ISD of the problem. IBM will not be required to proceed with its work under this SOW until El Paso ISD remedies such violation, nor will IBM be responsible for delays to the work caused by such violation.
2. IBM will not be responsible for the detection or removal of asbestos, hazardous waste or other pollutants.
3. It is specifically understood by El Paso ISD and IBM that all matters relating to detection and/or abatement or removal of asbestos, hazardous waste or other pollutants are beyond the scope of this contract and that IBM shall not be liable for any delay or additional cost incurred as a result of such detections and/or abatement. If asbestos, hazardous waste or other pollutants are uncovered during the course of the work on the contract, then El Paso ISD shall be responsible for retaining the experts necessary to remove such asbestos, hazardous waste or pollutants from the site. El Paso ISD shall also be responsible for any testing and corresponding with appropriate government authorities.
4. Relocation and testing of existing computers, telecommunications, or CCTV equipment(s) or systems are not required as part of this SOW.
5. Removal of existing telecommunications or CCTV cabling is not required as part of this project.
6. Installation of any hardware, software and network electronics not specified in this SOW (e.g., workstations, servers, printers, routers, DSUs/CSUs, repeaters, modulators) are the responsibility of El Paso ISD.
7. We are not providing any Year 2000 services under this Statement of Work. IBM Product Specifications specify the Year 2000 readiness of the IBM Products. We do not make any representations regarding the Year 2000 readiness of the non-IBM Products.
8. Under the terms of this Statement of Work we are not responsible for 1) your products, 2) a third party's products (including products you license from our subcontractors) or 3) IBM's previously installed Products, ("Other Products") to correctly process or properly exchange accurate date data with the Products or deliverables we provide. We will be relieved of our obligations under this Statement of Work due to the inability of such Other Products to correctly process or properly exchange accurate date data with the Products or deliverables we provide to you. You acknowledge that it is your responsibility to assess your current systems and take appropriate action to migrate to Year 2000 ready systems.
9. It is understood by El Paso ISD and IBM that all matters relating to physical construction of new wiring closets/equipment locations and retrofits for existing wiring closets/equipment locations, (general construction buildout, HVAC, electrical, lighting, construction permits) is the responsibility of El Paso ISD.

2.0 IBM RESPONSIBILITIES

2.1 Project Management

Task Description: The objective of this task is to provide technical direction, maintain project control and to establish a framework for reporting, procedural, and contractual activity for the IBM tasks described. This task consists of the following activities and documentation:

- Establish procedures and coordinate IBM efforts with the El Paso ISD Project Manager.
- Develop and maintain work plans for the performance of IBM responsibilities.
- Administer the Project Change Control Procedures.
- Review the project progress with the El Paso ISD Project Manager and team members during Weekly status meetings.
- Prepare and submit written weekly Status Reports of IBM activities to the El Paso ISD Project Manager.

Completion Criteria: This task will be considered complete when the other tasks identified under IBM Responsibilities have been complete and final Status Report has been delivered to the El Paso ISD Project Manager.

Deliverables / Documentation: Weekly Status Reports

2.2 Perform Site Survey

Description: The objective of this task is to visit the El Paso ISD locations and perform the site survey using materials and processes jointly developed by El Paso ISD and IBM:
The subtasks are:

1. Verify and/or correct site general information
2. Identify and document site's special considerations:
   - Site's labor requirements and works restrictions (e.g. union vs. Non-union environments, works hours, access restrictions, special condition or limitations) that may affect the site's rollout.
   - Safety regulations - as may apply from municipalities
   - Site security requirements
   - Any unusual site conditions (e.g., site to be closed in one week)
3. Identify Equipment Room locations and requirements as it pertains to the equipment to be installed.
   - Isolated electrical power circuit availability
   - Heating and air-conditioning
   - True earth ground availability
   - Access security
   - Fiber/Telephone circuit connection – DS3, T1, ISDN

Completion: This task will be complete for an El Paso ISD location when IBM delivers one (1) copy of the Site Survey Documentation to the EPISD Project Manager.

Deliverable: Site Survey Documentation

2.3 Install and Test Cabling

Task Description: IBM will install and test cabling in support of the adds, moves and changes to the cabling plant for El Paso ISD per the specifications contained in Appendix C and Appendix D. The sub-tasks are:

- Provide up to 6,500 cable drops, and associated equipment, including moves, adds and changes.
- Provide moves, adds, and changes to the existing cable plant. It is understood that moves of cable drops will be to a point closer to the communication closet. The cable drops moved will be tested to verify that they meet specification requirements.
- Provide cabling connections between the main building at a campus and new buildings, which are not portables or cottages for the purpose of delivering signal to their ICs.
- Provide cabling installation for designated new schools built in the District within the contract term.
- Provide cabling to attach designated portable classroom buildings moved between campuses as required based on the terms outlined in the contract.
- Build portable classroom ICs for portables moved between campuses as required based on the terms outlined in the contract, to include only wall-mounted rack and required patch panels.
- Install specified data drops including the installation of a 2' cabinet rack in El Paso ISD computer labs, MCs, and ICs and HCs.
- Build MCs and ICs facilities as defined in Appendix D.
- Provide testing for the cabling installed under this SOW as defined in Appendix D.
- Provide "As Built" drawing documentation for the cabling installation.
- Compile a Project Cabling Test Book - Documentation.

Completion Criteria: This task will be considered complete when IBM delivers one (1) set of "As Built" drawings and one (1) copy of the Project Cabling Test Book to El Paso ISD.

Deliverables / Documentation:

- "As Built" drawings
- Project Cabling Test Book
- Cut Sheets and Test Results

2.4 Installation of UPS

Task Description: IBM will configure and install two-hundred (200) Uninterruptible Power Supplies as contained in Appendix E, in the MC and IC throughout the El Paso ISD. The sub-tasks are:

- Provide Hardware as listed in Appendix E.
- Deliver each UPS to its designated location as agreed upon by IBM and El Paso ISD.
- Install UPS hardware.
- Perform power on system test.
- Implement Powerchute software with existing server.

Completion Criteria: This task will be considered complete when IBM delivers one (1) Site Network Installation Document to El Paso ISD.

Assumption:

- IBM is responsible for the Fiber/Telephone circuit connection – DS3, T1, ISDN

Deliverables / Documentation:

- Site Installation Document

3.0 EL PASO ISD RESPONSIBILITIES

The responsibilities listed in this section are in addition to those responsibilities specified in the IBM Customer Agreement and are to be provided at no charge to IBM. IBM's performance is predicated upon the following responsibilities being fulfilled by El Paso ISD.

3.1 Project Management

Provide a Project Manager for the duration of the project to whom IBM and El Paso ISD communications can be addressed and who has the authority to act on behalf of El Paso ISD on all aspects of the project.

- Manage and perform the El Paso ISD Responsibilities contained in Section 3.0.
- Provide liaison between project participants.
- Manage the Project Change Control Procedure for El Paso ISD.
- Respond within two (2) business days to any request by IBM unless otherwise mutually agreeable by El Paso ISD and IBM.
- Help resolve project issues with the El Paso ISD organization.
- Provide full access to all School locations as required under this SOW.
- Communicate with appropriate El Paso ISD personnel at your location of the work to take place and obtain their approval if necessary.
- Provide floor diagrams of affected campus locations in 8 1/2 x 11 hardcopy format.
- Provide all the necessary closet and/or equipment areas for location of network electronics, racks and cabinets as described within this SOW.
- Provide all necessary power and environmental support to accommodate all IBM and El Paso ISD provided equipment.
- Inform IBM of any change in network requirements in accordance with the IBM Project Change Control Procedure, Appendix B.
- Provide required conduit and trenching within the project schedule timeframe should El Paso ISD require IBM to utilize buried or underground conduit that does not currently exist.
- Provide personnel to witness and authorize standard testing of each school building as the installation/testing activities are completed.
- Locate and mark all water, gas, electrical or any other underground pipes or cabling in the path required for the trenching for the fiber connection, before trenching can be started.
- Permit posting of any notifications required by applicable law for Services provided at your locations.

3.2 Space, Facilities and Utilities

- Provide installation facilities for all equipment. El Paso ISD is responsible for space allocation, HVAC and electrical considerations. El Paso ISD is responsible for providing power, light and water necessary in performance of this project.
- IBM and our subcontractor will have access to all buildings to perform the IBM Responsibilities specified in this Statement of Work. Any security requirements inclusive of guard, security codes/access codes, lighting and internal access and/or central monitoring are the responsibility of El Paso ISD.
- Adequate space will be made available for the installation of all products related to this project.

3.3 Security and Laws

El Paso ISD will identify and make the interpretation of any applicable federal, state, and local laws, regulations and statutes to see that the services provided by IBM comply.

3.4 Data Privacy

EPISD agrees to allow IBM and entities within its Enterprise to store and use EPISD contact information, including names, phone numbers, and e-mail addresses, anywhere IBM does business. IBM will process such information only in connection with our business relationship, and IBM reserves the right to provide such information to entities within its Enterprise, and its contractors, Business Partners and assignees performing services under this SOW, for uses consistent with their collective business activities, including communicating with EPISD (for example, for processing orders, for promotions, and for market research).

3.5 Required Consent and Indemnity

EPISD will promptly obtain and provide to IBM Global Services all Required Consents necessary for IBM Global Services to provide the Services described in this Statement of Work. A Required Consent means any consents or approvals required to give IBM Global Services and IBM Global Service's subcontractors the right or license to access, use and/or modify (including creating derivative works) to the hardware, software, firmware and other products that EPISD. uses, without infringing the ownership or license rights (including patent and copyright) of the providers or owners of such products.

EPISD will indemnify, defend and hold IBM, IBM affiliates, and subcontractors, harmless from and against any and all claims, losses, liabilities and damages (including reasonable attorneys' fees and costs) arising from or in connection with any claims (including patent and copyright infringement) made against IBM, alleged to have occurred as a result of EPISD's failure to provide any Required Consents.

IBM will be relieved of the performance of any obligations that may be affected by EPISD's failure to promptly obtain and provide any Required Consents to IBM.

4.0 DELIVERABLE MATERIALS/ DOCUMENTATION

The following items will be delivered to El Paso ISD under this Statement of Work. See Appendix A, "Deliverable / Documentation Guidelines" for a description of each deliverable/documentation. The deliverables are Type II materials as described in the IBM Customer Agreement.

- Weekly Status Reports
- Site Survey Document
- "As-built" drawings
- Cut Sheets and Test Results
- Site Installation Document

5.0 PROJECT SCHEDULE

5.1 Project Dates

- Start Date – July 1, 2002.
- End Date – June 30, 2003.

5.2 Project Delays

IBM will not be responsible for delays or additional requirements imposed by any government agencies or unforeseen conditions such as delays in the progress of the project by your acts or neglect or the acts or neglect of your employees or separate contractors employed by you, by changes ordered in the project not caused by the fault of IBM, by labor disputes, fire, unusual delays in transportation, adverse weather conditions not reasonably anticipatable, unavoidable casualties or other causes beyond IBM's control or by another cause which you and IBM agree is justifiable, the contract time shall be reasonably extended and the charges adjusted, if necessary, by Change Authorization.

6.0 COMPLETION CRITERIA

IBM shall have fulfilled its obligations under this Statement of Work when any one of the following occurs:

- IBM accomplishes the tasks described in section 2.0, "IBM Responsibilities,"
- El Paso ISD terminates the Project in accordance with the provisions of the IBM Customer Agreement.
- The End Date for the contract is reached.

7.0 CHARGES

Total Charges **$7,707,500**

The Services Charge stated here represents the maximum allowable charges for all services that may provided under this Statement of Work. IBM understands that the decision to implement this project is contingent upon award to the District of funding under the E-Rate program. IBM will not begin work on this project without written notification from EPISD that funding has been approved and that work should begin. If such notification has not been received by December 31, 2002, at IBM's option, IBM may terminate this Statement of Work or implement an extension of this Statement of Work, as well as changes in pricing or other terms and conditions as may be required, via the Project Change Control Procedure outlined in Appendix B.

E-Rate Invoicing: Prior to commencing work, IBM requires 1) a fully signed contract signature sheet; 2) a P.O. in the amount that the E-Rate program is not funding (e.g. non-discounted portion of the eligible costs plus the non-eligible costs), and; 3) a copy of the USAC's Funding Commitment Decision Letter.

As a service to the school, IBM will perform dual billing per E-Rate terms and conditions. First, IBM will invoice the school monthly, as work is completed, for the 'non-discounted' portion of the ELIGIBLE items and for the non-ELIGIBLE items. Secondly, under separate invoice, IBM will invoice the E-Rate FCC Snowe-Rockefeller administration for the remaining discounted portion of the ELIGIBLE items. Payment is due as specified in the invoice.

Please note that although IBM will bill the school for the 'non-discounted' portion and other charges not eligible under the E-Rate program, the school assumes responsibility for the entire contract services charge. Not withstanding any other provision, the District has the right to terminate this agreement for business reasons if written termination notice is given to IBM prior to any work being perform or service provided.

Excluded from the Services Charge are items involving, but not limited to; repairs to the Location for correcting existing code deficiencies, painting, asbestos removal, plumbing, heating and ventilation, air conditioning work, etc.

IBM Service Provider Identification Number (SPIN): 143005607

IBM reserves a purchase money security interest in the Machines until IBM receives payment of the amounts due. You authorize IBM to prepare and file a financing statement to perfect its purchase money security interest in all Machines you order and IBM delivers under this Statement of Work.

7.1 Payments Schedule

IBM will invoice El Paso ISD and the SLD monthly for services provided and materials delivered during that month. Payment is due upon receipt of invoice by the El Paso ISD Accounts Payable Department.

8.0 THIRD PARTY AUDITS

IBM will assist El Paso ISD in a project audit(s). IBM's records, which shall be limited to relevant time cards, copies of invoices to El Paso ISD and related documents such as Change Authorizations hereinafter referred to as "records" shall be open to inspection and subject to audit and/or reproduction by El Paso ISD's agent or its authorized representative to the extent necessary to adequately permit evaluation and verification of a) IBM compliance with contract requirements, b) compliance with El Paso ISD's business ethics policies, and c) compliance with provisions for pricing change orders, payments or claims submitted by IBM or any of his payees.

APPENDIX A DELIVERABLE / DOCUMENTATION GUIDELINES

A.1 Weekly Status Reports

Purpose: IBM will provide Status Reports Weekly during the project to describe the activities, which took place during that period. Significant accomplishments, milestones and problems will be described.
Delivery: One (1) hard copy will be delivered to the El Paso ISD Project Manager within three (3) working days following the reporting period.
Content: The report will consist of the following, as appropriate:

- Activities performed during the reporting period
- Activities planned for the next reporting period
- Project change control summary
- Problems, concerns, and recommendations
- Billing summary

A.2 Site Survey Document—Documentation

Purpose

IBM will provide a Site Survey Document for the El Paso ISD location detailing locations, requirements, and special considerations.

Delivery

One (1) hard copy of the document and on (1) electronic copy will be delivered to the El Paso ISD Project Manager.

Content

The report will consist of the following, as appropriate:

- Site general information
- Site special considerations
- Equipment room locations and requirements

A.3 Documentation: "As Built" Drawings

Purpose: IBM will provide 11" x 17" "As-built" drawings, marked-up plan views showing drop and MC/IC equipment locations.
Delivery: One (1) hard copy will be delivered to the El Paso ISD Project Manager within five (5) working days following the reporting period.
Content: The report will show drop and MC/IC equipment locations.

A.4 Documentation: Project Cabling Test Book

Purpose: IBM will deliver one (1) copy of the Project Cabling Test Book. This will be a copy of the Cable Test Forms for Category 5e data cabling and fiber optic cabling.
Delivery: One (1) hard copy will be delivered to the El Paso ISD Project Manager within thirty (30) days of project completion.
Content: The report will show cable tests results for all cable installed on this project.

A.5 Documentation: Project Cabling Cut Sheets Test Results

Purpose: IBM will deliver one (1) copy of the Project Cabling Cut Sheets. This Book will contain copies of the Cable Cut Sheet Forms that comply with Category 5e data cabling and fiber optic cabling.
Delivery: One (1) hard copy will be delivered to the El Paso ISD Project Manager within thirty (30) days of project completion.
Content: The report will show cable cut sheet forms that comply with El Paso ISD Standards.

A.6 Documentation: Site Installation Document

Purpose: IBM will deliver one (1) copy of the Site Installation Document for all sites a UPS is installed summarizing the installation of the network infrastructure at each remote location.
Delivery: One (1) hard copy and (1) one soft copy will be delivered to the El Paso ISD Project Manager within thirty (30) days of project completion.
Content: The report will include serial numbers and closet locations of each UPS.

APPENDIX B

Project Change Control Procedure

When both of us agree to a change in this Statement of Work, a written description of the agreed change (called a "Change Authorization") will be prepared, which both parties must sign. The Change Authorization will describe the change, the rationale for the change, and specify any change in the charges, schedule or other terms. Depending on the extent and complexity of the requested changes, IBM may charge for the effort required to analyze it. When charges are necessary in order to analyze a change, IBM will provide a written estimate and begin the analysis on written authorization. The terms of a mutually agreed upon Change Authorization will prevail over those of this Statement of Work or any previous Change Authorization.

APPENDIX C WIRING INSTALLATION STANDARDS

Telecommunications wiring standards and practices

Foreword
The purpose of this section is to set forth standards for the installation of low voltage wiring typically used for telephone or data communications in any and all facilities of the El Paso ISD. This document is intended to establish acceptable installation practices in all El Paso ISD buildings and should be used as a contract addendum for all projects done by contract involving such wiring. As such, this document binds any contractor awarded work involving low voltage wiring to conform to the specifications herein.

C1 Specifications

Placement/appearance

- All wiring should be placed in ceilings and walls, with only a jack (or other connector) on a faceplate establishing a connection point in all classrooms, offices, and other public areas. Data communications jacks are normally RJ45 or RJ11, and fiber optic cable terminations are normally ST connectors (either crimped or UV curved). These jacks and terminators will reside preferably on the same faceplate in a classroom or office. External control devices which would normally be placed on interior surfaces in a commercial building, must conform to UL standards and be listed by UL.
- Inside wiring closets, data connections can be made to patch panels, or (if the specifications so state) to surface mount faceplates with exposed wiring, with said wiring being bundled, and appropriately labeled. Patch cables connecting equipment must be contained in cable management trays, or wire wrapped for the serviceability of the cable plant. Connection of fiber optic cable must be housed in conduit (either flexible or rigid), and be appropriately labeled. All conduit containing fiber optic cable and all patch panels and cross connecting devices must be labeled Warning - Fiber Optic Cable.
- Low voltage wiring terminating at other equipment (, multimedia distribution equipment, etc.) must conform to the connection standards of the equipment manufacturer. All such wiring must be appropriately labeled and if the wire is run into a classroom, library, multimedia room, or lab, it must be neatly installed with cables either bundled or installed into cable management devices.
- The use of Panduit TM, Wiremold TM, or other surface mount cable channel in any classroom, hallway, or other public area is expressly prohibited without prior authorization from the El Paso ISD.
- All wiring in the ceiling is to be bundled appropriately and labeled for maintainability and serviceability. Said bundles are to be securely attached to the roof support structure and should not be attached to any other wire, pipe, HVAC fixture, ceiling supports, etc. Cable paths must avoid interfering with the serviceability of all existing facilities above the ceiling. In the ceiling, all fiber optic cable must be run inside conduit (flexible or rigid) and must be labeled **Warning - Fiber Optic Cable.**

C2 Standards

The El Paso ISD follows the EIA/TIA 568B standards for data communications cable, and all new data communications cable installed must be category 5e compliant, and be certified as such by testing with electronic scanners. All data cable compliance certifications must be delivered to the El Paso ISD prior to completion of the installation. All fiber optic cable installed must also be tested for compliance with standards and certification of such compliance must be reported to the El Paso ISD prior to the completion of the project.

C3 Documentation

The district has a structured wiring plan in place; all additional wiring installed must be labeled appropriately. Labeling designations can be obtained from the Network Service Group of the Division of Technology. It is strongly recommended that any wiring installations be coordinated with the Network Services Group and the Facilities Departments.

Working in the campuses and school buildings

- Unless prior arrangements have been made with campus, buildings and El Paso ISD personnel, any wiring work must be performed during non-school hours. Most campus' classes are scheduled between 7:00 a.m. and 4:00 p.m. Therefore, as a general rule, all wiring work must be done at night, on weekends, or during school holidays.
- Unless other arrangements are made in advance, all classrooms, hallways, and other public areas must be restored to their normal appearance at the end of each work shift. Ceiling fans must be replaced, wall plates must be installed, and the area must be left clean in preparation for the next school day. No wiring ends, supply leftovers, or any other residue is to be left at the campus. Communication closets can be left in the work in progress stages so long as it does not interfere with the serviceability of the network and communications equipment in these rooms.
- At the completion of the wiring project, all ceiling tiles must be securely in place, all access points must be covered and be cosmetically and structurally complementary of the existing building. All supplies, equipment, and tools are to be removed from the building.

Firewalls

It is the responsibility of the wiring installer to ensure that any firewall penetrations are properly sealed and conform to building codes regulating firewalls and the sealing of penetrations.

APPENDIX D CABLING INSTALLATION AND TESTING SPECIFICATIONS

D1 Installation - General Descriptions and Definitions

Additional to MC (Re-Work, Clean-up)

Each MC (Main Cross Connect) required for additional work will have the following possible corrections:

- Re-locate existing rack and all attached media cables connected and terminated onto the rack; Re-test some or all existing circuits for test certification;
- Re-label some or all existing cabling circuits. Confirm or provide a qualified TGB for proper earthing and bonding of the MC.Additional to IC (Re-Work, Clean-up)

Each IC (Intermediate Cross Connect) required for additional work will have the following possible corrections:

- Re-locate existing rack and all attached media cables connected and terminated onto the rack;
- Re-test some or all existing circuits for test certification; Re-label some or all existing cabling circuits. Confirm or provide a qualified TGB for proper earthing and bonding of the IC.

Connecting Campus MC or IC to Classroom Lab (Inside Plant 4-strand fiber optic cable only)

- All MC/IC to Lab design will be of the indoor type with a maximum length of 500' with not more than 3 inside cores through what may be firewalls to deliver pathway.
- Furnish and install up to five hundred feet (500') of 4-Strand multimode (62.5x125um) Plenum Indoor Fiber Optics Cable from the MC or IC to the Lab. This pathway will be held by the use of J" Hooks installed not more than 5' apart on red metal or on ceiling points not on ceiling grids or ceiling wire.
- The Fiber will be terminated onto Siemon Anaerobic SC or SFF Fittings and installed into an existing wall cabinet.
- Furnish and install two -(2) duplex 1 meter Fiber Optics Patch Cables SC-SC.
- IBM will provide wire management for a comprehensive, neat completion of work.
- AS BUILT schematics on cabling performed will be supplied.

Connecting Campus MC to Campus IC (Inside Plant 6-strand fiber optic cable only)

- All MC to IC design will be of the indoor type with a maximum length of 500' with not more than 3 inside cores through what may be firewalls to deliver pathway.
- Furnish and install up to five hundred feet (500') of 6-Strand multimode (62.5x125um) Plenum Indoor Fiber Optics Cable from the MC to the IC. The Fiber will be terminated onto Siemons Anaerobic SC Fittings.
- Furnish and install up to one (1) 24 port Siemons L.I.U. (Light Guide Interface Unit) with 6 SC Loads at the IC.
- Furnish and install into existing MC Fiber Cabinet the new terminated SC connections and loads for a final pathway to IC.

- Furnish and install two - (2) duplex 1 meter Fiber Optics Patch SC-SC JumperCables.
- IBM will provide wire management for a comprehensive, neat completion of work.
- AS BUILT schematics on cabling performed will be supplied.

Connecting Campus MC to Campus IC (Inside Plant 12-strand fiber optic cable only)

- All MC to IC design will be of the indoor type with a maximum length of 500' with not more than 3 inside cores through what may be firewalls to deliver pathway.
- Furnish and install up to five hundred feet (500') of 12-Strand multimode (62.5x125um) Plenum Indoor Fiber Optics Cable from the MC to the IC. The Fiber will be terminated onto Siemons Anaerobic SC Fittings.
- Furnish and install up to one (1) 24 port Siemons L.I.U. (Light Guide Interface Unit) with 12 SC Loads at the IC.
- Furnish and install into existing MC Fiber Cabinet the new terminated SC connections and loads for a final pathway to IC.
- Furnish and install two - (2) duplex 1 meter Fiber Optics Patch SC-SC Jumper Cables.
- IBM will provide wire management for a comprehensive, neat completion of work.
- AS BUILT schematics on cabling performed will be supplied.

Connecting Campus MC to Campus IC (Inside Plant Cat 3 UTP voice distribution *FEEDER* cable only)

- Furnish and install up to three hundred fifty feet (500') 100-pair Telephone Plenum Backbone Cable from the MC to the IC and punch down.
- Furnish and install one ¾" plywood backboard that has been fire retardant treated and firmly attached to the wall area.
- Furnish and install two (2) Siemons 110 blocks with legs and C-4's one at the MC Backboard and one at the IC backboard for punch-down of telephone backbone cable.
- The Backbone cable pathway will be held by the use of Caddy Cat.32 "J" Hooks installed not more than 5' apart on red metal or on ceiling points not on ceiling grids or ceiling wire.
- AS BUILT schematics on cabling performed will be supplied.

Connecting Campus MC to Campus IC (Inside Plant) (Turn-Key)

- All MC to IC design will be of the indoor type with a maximum length of 500' with not more than 3 inside cores through what may be firewalls to deliver pathway.
- Furnish and install up to five hundred feet (500') of 12-Strand multimode (62.5x125um) Plenum Indoor Fiber Optics Cable from the MC to the IC. The Fiber will be terminated onto Siemons Anaerobic SC Fittings.
- Furnish and install up to five hundred feet (500') 100-pair Telephone Plenum Backbone Cable from the MC to the IC and punch down.
- Furnish and install one (1) 3' x 19" Swing Away Rack onto a ¾" plywood backboard that has been fire retardant treated and firmly attached to the wall area.
- Furnish and install two (2) Siemons 110 blocks with legs and C-4's one at the MC Backboard and one at the IC backboard for punch-down of telephone backbone cable.
- Furnish and install up to one (1) 24 port Siemons L.I.U. (Light Guide Interface Unit) with 12 SC Loads at the IC.

- Furnish and install into existing MC Fiber Cabinet the new terminated SC connections for a final pathway to IC.
- Furnish and install two -(2) duplex 1 meter Fiber Optics Patch SC Cables.
- IBM will provide wire management for a comprehensive, neat completion of work.

AS BUILT schematics on cabling performed will be supplied.

Dual Cable Drops

- Each dual drop location will be serviced by the following cables: two (2) each category 5e, 4-pair cables. The number of locations will vary per site and will be determined by IBM and El Paso ISD prior to installation. Each Dual Drop is priced using existing pathway only – existing pathway definition means IBM will not have to core through walls, add conduit, or add panduit.
- The following is the dual drop termination scheme (the equipment to be connected to is assumed to already be in place at the telecommunications closet end) for each cable:

Cable	Termination
Category 5e Data	Rack mounted 48-port Cat 5e RJ45 568B high density patch panel
Category 5e Voice	Siemons Wall mounted 110 block

- IBM will provide wire management for a comprehensive, neat completion of work.
- AS BUILT schematics on work to be performed will be supplied.

Composite Cable Drops

- Each classroom location drop will be serviced by a composite cable, consisting of three (3) each category 5e, 4-pair cables, and one (1) each 62.5/125 micros fiber duplex cable. The number of locations will vary per school and will be determined by IBM and El Paso ISD prior to installation. Each Composite Drop is priced using existing pathway only – existing pathway definition means IBM will not have to core through walls, add conduit, or add panduit.
- The following is the termination scheme (the equipment to be connected to is assumed to already be in place at the telecommunications closet end) for each cable within the composite cable:

Cable	Termination
Category 5e Data	RJ45 Category 5e 568B Insert
Category 5e Video	RJ45 Category 5e 568B Insert
Category 5e Voice	RJ45 Category 5e 568B Insert
Duplex Fiber	ST-UV Anaerobic connector in a rack mounted F.C.

- All termination's will reside on a single gang simplex faceplate.
- The following is the termination scheme for composite cable (in the telecommunications closet)

Cable	Termination
Category 5e Data	Rack mounted, 24 port modular patch panel
Category 5e Video	Rack mounted, 24 port modular patch panel
Category 5e Voice	Siemons Wall mounted 110 blocks
Duplex Fiber	ST-Anaerobic connector in a rack mounted F.C.

- IBM will provide wire management for a comprehensive, neat completion of work.
- IBM will provide AS BUILT schematics on cabling work performed.

Classroom Combination Drops

- Each classroom location drop will be serviced by a combination cable drop, consisting of six (6) each category 5e, 4-pair cables terminated onto Siemons jacks, and the re-termination of the existing (1) RG-6 coaxial cable and (1) telephone cable drop; OR, each classroom location drop will be serviced by a combination cable drop, consisting of four (4) each category 5e, 4-pair cables terminated onto Siemons jacks, and the re-location of (2) existing Siemons terminated Data jacks. The number of locations will vary per school and will be determined by IBM and El Paso ISD prior to installation. Each Classroom Combination Drop is priced using existing pathway only – existing pathway definition means IBM will not have to core through walls, add conduit, or add Panduit.
- The following is the termination scheme (the equipment to be connected to is assumed to already be in place at the telecommunications closet end) for each cable within the classroom combination cable:

Cable	Termination
Category 5e Data	RJ45 Category 5e 568B Insert
RG-6 Video	'F' Type Insert/connector
Category 3 or 5e Voice	RJ45 or wall mount Category 5e 568B Insert

- All terminations will reside on a single gang simplex faceplate.
- The following is the termination scheme for composite cable (in the telecommunications closet)

Cable	Termination
Category 5e Data	Rack mounted, 24 port MX series patch panel